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**The Problem of Motivation in the Third
Dimension of Combat: What's the Solution?**

**A Monograph
by**

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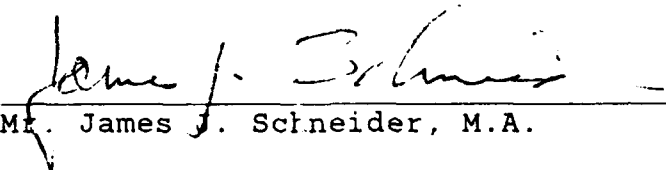
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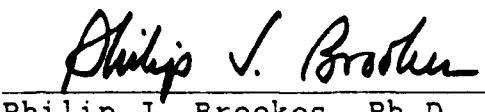
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ABSTRACT

THE PROBLEM OF MOTIVATION IN THE THIRD DIMENSION OF COMBAT - - WHAT'S THE SOLUTION?

by Major Jerry D. Garrett, USAF, 65 pages.

The mission of The United States Air Force is to fly, fight, and win. This monograph seeks to determine what is the best means of motivating airmen under fire, minimize the effects of combat stress, and avert unit disintegration. This journey begins with a brief review of classical theory on combat motivation and then transitions to the more contemporary assertions of Anthony Kellett. From Kellett's analysis, four elements are drawn together to form the basis and criteria by which commanders and aircrews alike can gauge their preparedness for dealing with the stress, fear, and anxieties of combat.

With a theoretical basis and model established, this monograph proceeds with an examination of the 1972 Linebacker II campaign against North Vietnam. This examination begins with an overview of B-52 Arc Light operations and then focuses upon a chronological analysis of Linebacker II with the intent of gaining a historical perspective into the inherent problems of motivating aircrews in combat.

Following some analysis into the influence of aircrew morale, cohesion, training, and leadership during this campaign, this project concludes with a brief discussion of the implications of these four elements upon today's and tomorrow's aerial battlefield. In closing, this monograph suggests that perhaps now is the ideal time to shift our attention away from the "machine" and focus upon the "man" and the elements that influence his will to fight.



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Section One

Introduction

War is fundamentally a human phenomenon, a matter of emotions, aspirations, exertions and suffering. Though concrete, physical and statistical factors obviously play a role in determining conflict's outcome, war ultimately comes down to a contest of knowledge, intelligence, willpower, and human endurance.

Lieutenant Colonel John F. Guilmartin, 1982¹

The primary mission of the United States Air Force is to fly, fight, and win. The purpose of this monograph is to challenge aircrews, current and prospective commanders, and doctrine writers to focus on those moral factors that influence the Air Force's ability to accomplish this mission. The theme of this study has nothing to do with aircrew retention problems, questions about increased flight pay or bonuses, or other incentives that might prompt an individual to become a military aviator. Instead, this study addresses the issue of combat motivation and the many factors that impact upon an aircrew's will to fight.

In his book Combat Motivation, Anthony Kellelt briefly describes the anxieties and fears of World War II allied bomber crews flying missions in Central Europe. He portrays the aviator's battlefield as an arena of brief periods of concentrated enemy threats, sandwiched between extended periods of relatively threat-free flight. While Kellelt fails to elaborate further on this subject, other sources document that in 1944 alone, as many as 6,400 Royal Air Force and U.S. Army Air Force airmen became combat stress casualties.² In Thud Ridge, author and former fighter pilot Jack Broughton, confirms Kellelt's assessment as he describes the anxiety,

stress, and fears of modern aerial warfare over North Vietnam.

Currently, an untold number of U.S. and allied aircrews have begun air strikes in the war against Iraq. Yet, similar to Broughton's era, neither combat motivation nor combat stress are topics frequently discussed by Air Force aircrews or their commanders. Past conflicts clearly suggest that the intensity and lethality of sustained operations on today's battlefield will produce combat stress casualties. From combat stress comes the potential of an airman's unwillingness or refusal to fight. This inner turbulence may be the spark which leads to widespread disunity and unit disintegration. The critical question then becomes, how can the Air Force best motivate its aviators, minimize combat stress, and avert aircrew disintegration?

To answer this question, this study first seeks to arrive at a common understanding of the relationship between combat motivation, stress, and aircrew disintegration. Section two examines both the concept of combat motivation and those organizational and individual factors that are essential to motivate soldiers and aviators under fire. Using leadership, group cohesion, morale, and training as a basis for criteria and analysis, this chapter focuses upon the synergistic effect of these four components as the primary tools for reducing battlefield stress and sustaining combat motivation.

Using the 1972 USAF Linebacker II bombings of North Vietnam, Section Three seeks to provide a historical perspective into the inherent problems of motivating aircrews during sustained combat operations. This section begins with an overview of B-52 Arc Light operations in Southeast Asia, and then transitions into a

chronological analysis of the Linebacker II offensive.

Drawing from this examination, Section Four analyzes what role - whether positive or negative - leadership, cohesion, morale, and training played in motivating USAF bomber aircrews during this eleven day war. The discussion here not only aspires to identify when changes in aircrew motivation occurred, but also why. Some important concerns of this analysis include the organizational climate, leadership, and events influencing aircrew motivation.

Finally, Section Five concludes this research effort with implications and recommendations as to how a commander can guard against the potential of aircrew disintegration by ensuring both he and his aircrews are prepared to deal with the stress and reality of combat.

Yet, an important aspect of any research is the method or means used to collect the data. For this project, sources have been largely confined to unclassified research studies and open source publications. However, when examining problems such as morale, leadership, or adverse performance in combat, documentation is seldom plentiful. As a result, personal interviews with a select group of airmen who participated in Southeast Asia B-52 operations have also been employed to help bridge this gap. Having established the road map for my research, it is now time to examine what motivates an aviator.

Section Two

Fear, Disintegration, and The Will To Fight

In the aftermath of the great WWII allied bomber offensive in Europe, two US Army Air Force (USAAF) psychiatrists asked:

What is the force that compels a man to risk his life day after day, to endure the constant tension, the fear of death, the teasing threat of flak, the steady loss of friends, the empty beds in the barracks? What makes him willing to put up with the sight of the injured, the bleeding, the dying, the burning plane on his wing exploding into a thousand anonymous fragments? What can possess a rational man to make him act so irrationally?

Since that time, technology has revolutionized yesterday's aerial battlefield into an arena that will certainly challenge the mental and physical skills of our best aircrews. Today's enemy air order of battle offers an array of passive and active early warning and detection systems; a fleet of highly sophisticated aircraft proficient in destroying their target with little or no warning; an equally capable network of surface-to-air (SAM) and anti-aircraft artillery (AAA) sites; and a command and control structure synchronizing these assets for maximum combat effectiveness.

To negate threat effectiveness, the aircrews will be forced to fly at extremely low altitudes, often under the cover of darkness. Such operations will stretch their mental concentration and physical dexterity as they seek to fly low enough to avoid the consequences of detection, yet high enough to preclude crashing into the ground. Approaching the target area, the crew's concerns will expand to identify the target, to achieve minimum weapon arming speed and altitude criteria, and to safeguard against the possibility of fratricide.

After striking the target, both the physical and mental strain

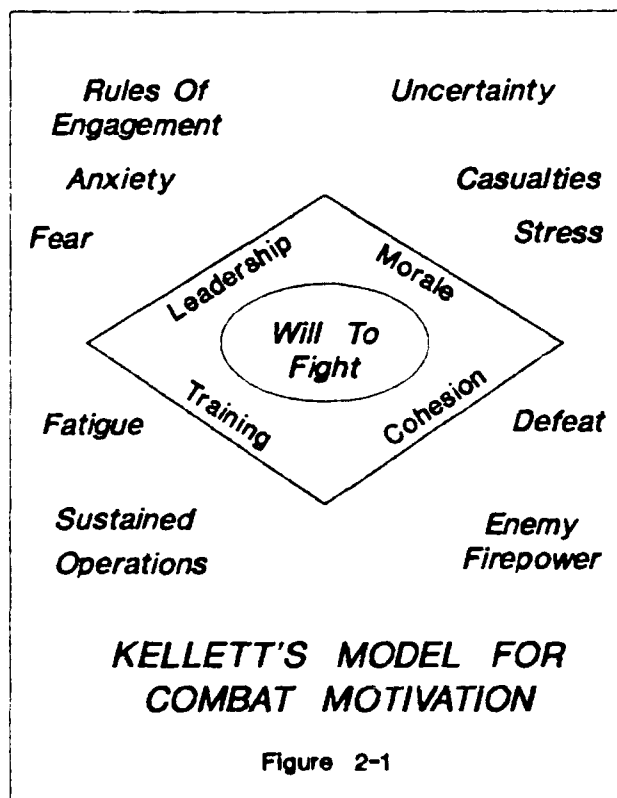
will continue as the aircrew resumes their threat-evading tactics while preparing to penetrate the friendly air defense net. Once at homebase, the best an aircrew can expect are a few hours of rest, perhaps a hot meal and shower, and a new and equally demanding mission. Given such an environment, it seems only natural to ask once more, "What motivates an aviator in combat?"

In simple terms, motivation is the "why" of behavior. Motivation shapes a person's decision to act and sustains the level of commitment. On the battlefield motivation becomes the conscious decision whether or not to risk life, injury, or capture in order to engage and defeat an enemy. A review of military history reflects that motivating men in combat is not a contemporary issue.

As early as 500 B.C., Sun Tzu recognized the difficulties of motivating troops under fire. His solution focused upon the "moral influence" of leadership, discipline, and cohesion.⁴ Centuries later, French Army Colonel Ardant du Picq would arrive at the same conclusion, citing "surveillance and mutual supervision" as key to mastering a soldier's fear of the battlefield.⁵ Clausewitz, Jomini, Moran, S.L.A. Marshall, and others also emphasized the moral domain of battle, each offering what they considered the most efficient way of motivating troops.

Yet, the most contemporary and comprehensive literature on what molds and sustains a soldier's will to fight is found in Anthony Kellett's book, Combat Motivation: The Behavior of Soldiers in Battle. Combining years of historical studies, theories and writings, Kellett has distilled those elements influencing combat motivation into individual and organizational components. From these

components, four inter-related sub-groupings have been chosen for this research project. As the model in Figure 2-1 illustrates, these groupings include leadership, cohesion, morale, and training. It is the synergistic effect of these groupings that can bolster and sustain an aviator's will to fight, or in their absence, weaken and reduce his desire to continue battle. This model, in essence, forms a criteria for which leaders and aircrews can gauge their preparedness dealing with the stress of combat. However, before further discussing these elements, it is important to identify those factors that seek to undermine one's will to fight.



Fear, whether real or perceived, has been widely recognized as the primary hurdle in motivating soldiers and aviators on the battlefield. This powerful emotion is a rational response to real

life situations and is usually based upon threats to one's safety and well-being. In Anatomy of Courage, Lord Moran argues, "The first and last cause of a pilot's collapse is a persistent state of fear." E.J. Dearnaley and P.B. Warr's study, Aircrew Stress in Wartime Operations, supports Moran's claim, citing fear as the single most important cause of neurosis in aircrews.¹ Their study lists the most prevalent fears among aviators as: threat of personal injury; death or the consequences of capture; letting one's comrades down; and finally, a fear of failure.

Anxiety is another nemesis in motivating aviators in combat. Anxiety is a by-product of fear. However, in contrast to a "real threat," anxiety is an apprehension over an imagined threat, and one's self-doubt about being able to cope with this threat.¹ Frequent sources of an aviator's anxiety include personal experiences or observation of a traumatic event, "war stories" related by other flyers, and rumors or suspicions concerning equipment reliability. Incompetent or inadequate leadership, a shortfall of trust and confidence in fellow crew members, poor morale, and a lack of self-confidence can also incite or aggravate anxieties. As previously indicated in Operation Desert Shield - now Desert Storm -, the uncertainty of when, where, and if an enemy will attack can certainly stimulate anxiety.¹

For a combat flyer facing anxiety problems, inactivity becomes his worst enemy:

The night before a mission could be terrifying as the pilot's visions of the next day's mission kept him awake. Enroute to enemy territory was another relatively inactive period which provided abundant time to imagine the enemy's fighters, AAA and death, . . . for some, the return trip home and post mission were the

worst times as the idle time permitted the mind to clearly reconstruct the air battle and the dangers encountered.¹⁰

Furthermore, Roy Grinker and John Spiegel claim that if there is insufficient time between missions, moderate states of physical fatigue may develop. As emotional stress further denies the flyer adequate rest, physical fatigue begins to intensify to the point where the effect is increasingly cumulative.¹¹

If allowed to run its full course, the cumulative effects of fear, stress, and physical exhaustion will ultimately produce either an aviator who is mentally impaired from accomplishing his duties, or one who is simply unwilling to do so.¹² While both conditions demand a leader's immediate attention, it is with the second of the two that a leader needs to be most concerned. For from within an unwilling, unmotivated airman comes the potential spark that could ignite and spread further disunity within the unit. Unresolved, such disunity could lead to the disintegration of a once capable combat force.

This disintegration is the total and often unexpected collapse of a soldier and his unit's will to fight. Neither the concept nor the consequences of disintegration are foreign to the military profession. The failure of the French military in both 1917 and 1940, the Russian army in 1917, and the South Vietnamese in 1975 are but a few examples of the disastrous effects of disintegration.

In his article, The Potential of Military Disintegration, Stephen Wesbrook identifies three common traits of disintegration. The first of these is the inability of commanders to identify or predict the onset of unit disintegration, which is further

complicated by the second trait - that being the speed in which disunity spreads throughout the organization.¹³ Using the French Army of 1917 as an example, John Keegan attests that in less than two months, the "collective indiscipline" of a single battalion gave way to the disintegration of 54 of the 100 French divisions on the western front.¹⁴ Geoffrey Jukes' Death of An Army provides a similar pattern of events with the rout and disintegration of the Russian Army in 1917.¹⁵

The third, and the most devastating feature of disintegration, is the utter collapse and failure of the military unit in terms of combat effectiveness. The catastrophic failure of the South Vietnamese Army in 1975 and subsequent capitulation of its government accent this final characteristic. Yet, while it may be difficult predicting when unit disintegration might occur, the symptoms and causes of such a condition are readily identifiable.

From a historical perspective, the more classical causes of unit disintegration have included poorly trained troops, inadequate equipment, low morale and cohesion, inferior leadership, insufficient information, and the loss of comrades without any measurable gain of success.¹⁶ In their highly controversial analysis of the Vietnam conflict, Richard Gabriel and Paul Savage point to "officer careerism," disproportionate officer-enlisted ratios, and a rotation program that ultimately destroyed small unit cohesion as the primary grounds for U.S. Army disintegration.¹⁷

From a theoretical perspective, James J. Schneider's Model of Destruction, Disorganization, and Disintegration provides further insight into the causes of unit disintegration. Schneider explains

disintegration as a three tier process, with the destructive tempo of combat and percentage of lost combat power as the determining factors (See Figure 2-2). As the tempo intensifies, a unit's combat power, as measured by the effectiveness of command and control, leadership, and troop numbers, self-confidence, cohesion, and morale, begins to suffer. Based upon a unit's resilience, unit coherence begins a transition from a solid state of cohesion, to a liquid state of disorganization, and if unarrested, to a gaseous form of disintegration.¹¹

**Schneider's Model of
Destruction, Disorganization, & Disintegration**

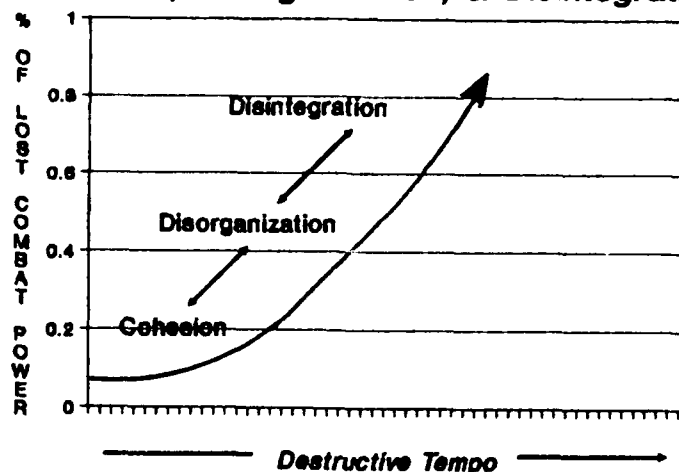


Figure 2-2

Traditionally, the symptoms and indicators of a unit besieged by disintegration include increased absenteeism, AWOL, and desertion rates, increasing and open friction between leaders and subordinates, and on numerous occasions, mutiny. For WWII bomber crews, the list includes spiraling sick-call rates, an increased number of "faked" aircraft problems resulting in mission aborts, crews purposely jettisoning their weapons at the first sign of the enemy, physical and verbal attacks upon superior officers, and an increase in

frequency and volume of combat refusals.¹⁹ If properly identified and analyzed, most of these problems could have been arrested through unit leadership, cohesion, morale, and training - which brings us back to Kellett's Combat Motivation Model.

Leadership

The primary function of tactical leaders is to induce soldiers to do difficult things in dangerous stressful circumstances.²⁰

In the daily operations of a combat flying unit, effective, competent, and strong leadership is perhaps the most important consideration in motivating airmen to fight. "Men, particularly in dangerous and high-stress situations, desire leadership so that their immediate needs may be met and their anxieties allayed."²¹ For a commander to be effective at motivating his troops, he must first gain the respect, confidence, and trust of his men while inspiring self-confidence among them.

To gain respect, confidence, and trust, a leader must be competent in his duties. If technically and tactically competent, his actions and decisions will reflect sound judgement and avoid unnecessary risks. In their analysis of WWII bomber aircrew, Grinker and Spiegel asserted:

The personal safety of his [the commander] fliers depend upon his skill, knowledge, and good judgement in battle. If he should prove himself to be inefficient, they lose confidence, feel insecure, and become naturally unwilling to follow him.²²

Thomas L. Lentz's research study, Combat Leadership: 56th Fighter Group 1943-1944, suggests that historically flyers will assume the personality and traits of their unit commander. Summarizing an interview with former Flight Leader Colonel "Bud"

Mahurin, Lentz states that when a leader displays an aura of self-confidence, courage, and aggressiveness, his subordinates will reflect similar qualities; conversely, if the leader exhibits signs of fear or weakness, both the leader and subordinates will suffer the consequence.¹³

Other sources also project a direct correlation between leadership and a unit's morale, cohesion, and motivation. In The Fighting Spirit, F. Richardson claims that leadership is "the most important single factor in the preservation of high morale."¹⁴ Israeli experiences in both 1967 and 1973 conflicts also underscore the significance of sound leadership in building strong unit cohesion, morale, and combat effectiveness.¹⁵

Cohesion

Like leadership, Kellett also views cohesion as an integral element in resolving a soldier's will to fight. Air Force doctrine agrees, describing cohesion as "the cement that holds a unit together through the trials of combat and is critical to the fighting effectiveness of a force."¹⁶ The basic notion of cohesion implies a "we" concept. Accompanying this concept is a sense of belonging; a mental, emotional, and spiritual bonding of men with common needs, fears, and goals. More importantly, cohesion breeds a sense of deep commitment - a commitment which ultimately enables a combatant to transcend his fear of combat, embracing the safety and well-being of his fellow comrades as his primary concern.

Numerous historical studies substantiate Kellett's correlation of cohesion and combat motivation. Edward Shils and Morris Janowitz's (1948) evaluation of WWII German Wehrmacht soldiers

associate high unit cohesiveness with increased combat effectiveness and Wehrmacht willingness to continue fighting despite attrition rates in excess of 50 percent.¹⁷ Grinker and Spiegel's (1945) analysis of WWII bomber aircrews, and J. Hemphill and L. Sechrest's (1952) studies of B-29 aircrews in Korea also equate high cohesion with highly motivated aircrews.¹⁸

The thought of "not letting the group down" is frequently cited as a major combat motivator among soldiers and aviators alike. John Dollard asserts that 94 percent of his study group saw fear of letting friends down as a strong motive for their actions in combat.¹⁹ A 1974 survey of Israeli Defense Force (IDF) veterans and a similar 1980 study of Swedish United Nations forces serving in Lebanon also list concern for group members as the top priority.²⁰ Comparable findings are also found in Grinker and Spiegel's Men Under Stress.²¹

Combat studies also provide various examples tracing high psychological casualties with low unit cohesiveness. Samuel Stouffler's comparison of US Army attitudes and combat stress casualties during the Normandy invasion show a higher incidence rate among units with minimal cohesion.²² Gregory Belenky's analysis of 1973 and 1982 IDF operations yields similar results.²³ Furthermore, Gabriel and Savage's (1978) study, Crisis in Command, attributes absence of unit cohesion as a leading factor in combat refusals, desertions, and the decay of the U.S. combat units in Vietnam.²⁴

To produce a highly cohesive unit, Kellett claims certain internal and external conditions must be met. Building trust and

confidence requires time, and such team qualities cannot develop if membership is constantly changing. Suggesting that personnel stability is not a contemporary problem, Kellett quotes Petronious Arbiter, a 210 B.C. military philosopher:

We trained hard, but it seemed that every time we were beginning to form up into teams we would be reorganized, . . . producing confusion, inefficiency, and demoralization."⁵

Leadership, commitment, and communications are equally important in promoting unit cohesion. Leadership supplies direction by establishing group goals and standards. Open communications enhance commitment by ensuring subordinates are aware of these goals and standards and how individual and group actions will contribute to their achievement.

Communications helps promote group cohesion by encouraging team-building, providing self-assurance through timely feedback, and preventing soldier isolation. Furthermore, Westbrook claims that groups, such as aircrews, that are forced to interact and communicate by the very nature of their weapon system tend to be among the most cohesive of military groups."⁶

Yet ironically, the most instrumental catalyst in developing a highly cohesive unit is the demand of external threat. "Cohesion is created by the stress of combat and serves as a remedy against it. In the absence of stress, the need for group cohesion is not distinctly felt."⁷ The source of this stress might be a strenuous, realistic training program, a visiting inspection team, or simply the enemy. Whatever the source, the external threat compels the group members to draw closer together and formulate a collective response in dealing with a common threat. In this process, overcoming the

threat elevates the group's trust and confidence in fellow comrades and leadership. It also reduces their fear and anxiety of combat while increasing identification and cohesion within the group. And finally, success over the threat provides a significant boost to individual and group morale.³

Morale

High morale strengthens courage, energy, and the will to fight.³

Morale has also been widely recognized as a vital element in sustaining a warrior's will to fight. As early as the fourth century B.C., Xenophon's analysis of Alexander the Great's campaigns led him to conclude that neither the size nor strength of one's army determines victory in war, but rather the army which is "stronger in soul" will prevail.⁴⁰ Napoleon too saw morale as a decisive element in resolving one's willingness to continue combat.⁴¹ More recently, the IDF has defined morale as their secret weapon against a wide range of adversaries and have claimed it as an effective predictor of a unit's true combat effectiveness.⁴²

In general terms, morale represents an individual's mental, emotional, and spiritual attitude of who he is, what he does, and how he does it. Grinker and Spiegel's study of aviators describes good or high morale as a state in which the men feel confident, happy, appreciated, and eager for combat.⁴³ Consequently, poor or low morale often denotes a loss of self-worth, apathy, a lack of recognition, and a reluctance to fight.

Whether high or low, good or poor, an aviator's morale is the product of many factors. John Baynes lists good food, adequate rest, mail, good medical and welfare services, efficient equipment, and

good communications as but a few of the key physical determinants of high morale.⁴⁴ Richardson's Fighting Spirit adds to this list, claiming: moral principles such as a devotion to duty, discipline, and self-respect; self-confidence gained through rigorous training; trust in one's equipment, comrades, and leaders; and, understanding the purpose for which he fights as the crucial elements of high morale.⁴⁵ A 1981 survey of IDF soldiers seeking to identify sources of both individual and unit morale produced a list virtually identical to Baynes and Richardson's earlier conclusions.⁴⁶

Military experience also tends to invariably link morale with success or failure on the battlefield. Field Marshall Montgomery claimed that "the best way to achieve a high morale in wartime is by success in battle."⁴⁷ Baynes offers Napoleon's 1796 campaign in Italy, Allenby in Palestine, and Slim in Burma as case studies of how units with near collapsing morale can be revived by the "tonic of victory."⁴⁸

Conversely, Kellett states that defeat or even the "prolonged absence of obvious success" can have a profound effect on both individual and group morale. Using Vietnam as an example, he claims a lack of success can undermine an airman's belief in the cause, jeopardize his faith in his leaders, shatter self-confidence and trust in fellow comrades, and erode unit integrity. Yet as our combat model suggests, realistic training can also provide the means which one can reduce the potential of defeat, increase morale, improve cohesion, and harden one's will to fight.

Training

The object of all training is to create a body of men who are not only capable of helping to win this war, but are determined to do so.⁴⁹

Realistic training is best described as the needle that threads together the elements of leadership, cohesion, and morale to form a nucleus of combat motivation. Realistic training provides the flyer with a reasonably accurate picture of the "feel, form, and scope" of his combat environment. This in turn increases his self-confidence by dispelling doubts, fears, and other concerns regarding his ability to perform under fire. Furthermore, a realistic training program renews one's trust in his equipment, tactics, leaders, and fellow comrades. Ultimately, realistic training reinforces a flyer's will to fight by reconfirming his belief that he can accomplish his mission and survive despite his adversary.

Recent U.S. military experiences reflect the benefits of realistic combat training. Ranger units taking part in the 1983 Grenada rescue operations listed realistic combat training as the number one reason for their success.⁵⁰ More recently, air and ground force commanders currently in Saudi Arabia declare that training exercises such as Bright Star, Checker Flag, Red Flag, and the National Training Center (NTC) have proved invaluable in negotiating the physical and mental stresses of Operation Desert Shield.⁵¹

Finally, realistic training provides the stimulus for increasing group morale, cohesion, and confidence in the tactical and technical competence of both leader and subordinate. Through challenging scenarios, training builds teamwork by transforming the

group into a "band of brothers, united against adversity," which in turn reinforces group cohesion, identification and morale."¹ Emerging USAF doctrine suggests the greater the challenge - the greater the cohesion, morale, and test of one's commitment to continue the battle.

In conclusion, leadership and the flyer's training, morale and cohesion play a tremendously important role in motivating warriors on the battlefield. Now turning our attention to an examination of the 1972 B-52 Linebacker II operations, we seek to gain a historical insight into how these four components integrate to sustain a flyer's will to fight.

Section Three

A Historical Perspective

From a historical perspective, the 1972 Linebacker II air campaign against North Vietnam provides an excellent illustration of what many military leaders have considered as the proper use of U.S. airpower. Admiral U.S.G. Sharp and former JCS Chairman Admiral Thomas Moore are among the most outspoken advocates of Linebacker II, each proclaiming the campaign achieved in eleven short days what eight years of combat had failed to accomplish."¹

Moreover, Linebacker II also provides an equally interesting case study in the trials and tribulations of motivating aircrews in combat. As previous combat studies indicate, combat produces stress, anxiety, and fear that will certainly test one's willingness to continue fighting - and Linebacker II was no exception. This section seeks to examine some of the stresses prevailing during this operation, and begins with a brief overview of pre-Linebacker B-52

operations.

Arc Light Operations

For the seven years prior to Linebacker, B-52s in Southeast Asia conducted missions under the operational title of Arc Light.⁵⁴ During this era, more than 126,600 B-52 strikes were flown against a wide variety of targets in Indochina.⁵⁵

To U.S. and allied ground forces, the B-52 Arc Light missions symbolized a novel form of long range "flying artillery." The 1968 fight for Khe Sanh is but one example of the massive bomber in a fire support role. During the first 75 days of this fight, more than 2,700 B-52 sorties pounded the two North Vietnamese Army (NVA) divisions attacking this U.S. Marine outpost. General William C. Westmoreland later praised the Arc Light aircrews, citing their contributions at Khe Sanh as the decisive element which ultimately "broke the enemy's back."⁵⁶

However, despite this and other successes, Arc Light and "milk run" soon became synonymous. Political concerns routinely denied B-52s the opportunity to strike targets north of the DMZ.⁵⁷ Operating far outside the reach of enemy air defense sites, Arc Light unwittingly became tagged as "the safest combat duty in the Air Force."⁵⁸ Increased reliance upon the Combat Skyspot (MSQ) ground radar sites added to the unchallenging "milk run" image. Originally designed to overcome bombing errors attributed to poor and inadequate maps, MSQ shortly became the primary means of directing B-52 strikes in Southeast Asia.⁵⁹ Soon, B-52 crews saw their most meaningful and principal source of professional pride -- the bomb run -- erode to an anti-climactic event consisting of a few radio calls.

Problems of indecisiveness plagued crew morale as well. Rather than striking at the "decisive targets" located in the enemy's homeland, typical Arc Light targets included "suspected" enemy strongholds, logistical sites, and staging areas south of the DMZ. Often, the remote locations of these targets precluded adequate post-strike analysis, thus the crews seldom received any feedback concerning their mission effectiveness.⁶⁰ Furthermore, when feedback was available, it frequently proved the value of the "suspected target" as either unfounded or unwarranted.⁶¹

By mid-1972, over 200 of SAC's B-52s and crews were either at Anderson AFB, Guam, or Utapao Royal Air Base, Thailand, sharing the Arc Light experience. On 22 November, the "milk run" image began to dwindle as the first B-52 in over seven years of combat fell victim to an enemy surface-to-air missile (SAM). Yet, as history reflects, this loss would only be a sampling of the things to come.

Linebacker II - Phase I

In the weeks preceding Linebacker II, hope and optimism permeated the spirits of the aircrews. Henry Kissinger had recently announced that "Peace was at hand," and an agreement between North and South Vietnam was near. On December 16, nearly all B-52 sorties that day and the next were unexpectedly canceled. Rumors claiming the peace talks had succeeded, the war was over, and all would be home by Christmas dominated the atmosphere at both B-52 bases.⁶² Aircraft maintenance personnel swarmed over the aircraft as if preparing them for a final trip home.

However, briefings on 18 December unveiled an entirely different scenario. For the next three nights, B-52s were to conduct

a maximum effort campaign against the enemy's capability and will to continue the war. Briefings for the first night called for 129 B-52s, attacking in three waves four hours apart, to strike targets in the Hanoi and Haiphong areas.

As the briefings progressed, the idea of bombing Hanoi produced mixed emotions among the aircrews. For some, the chance to finally "show them we mean business," "to get our licks in," and "going after Real targets" seemed to boost morale and motivation.⁴ One pilot recalls:

Most of us had spent many months, even years in Vietnam or Thailand and had the most to gain when it [war] was over. I was tired of watching my son grow up in snapshots [and] separated from my wife. My morale literally soared, now finally, we had a chance to end it.⁴

Yet for other flyers, the opportunity to go north was not a source of motivation, but rather fear and apprehension:

All you knew was that you were going "Downtown." If they had told you that the world was made of green cheese, you wouldn't even have heard it - all you were thinking about was were you going to make it back or were you not ... and what about the guy sitting next to you.⁵

Early that afternoon, the first of the three waves prepared for take-off. Pilot Robert Wolff remembers as the aircraft began moving towards the runway, it appeared as if the entire base population at Guam had gathered along the sides of the taxi ramps and runway. As if readying their warriors for battle, everyone stood at attention and saluted as each bomber taxied by.⁶ This scene and inspiration would be long remembered by Wolff and his comrades in the trying days to come.

Shortly after nine o'clock, the second wave of 30 B-52s from Guam were approaching their air refueling areas, when they began

overhearing strike reports from the first wave. In contrast to the Arc Light missions of previous years, visions of invulnerability soon evaporated as the reality of true combat became readily apparent:

"Spellman (Guam command post call sign), this is Taber 87 with hot news report. SAM activity extremely heavy all quadrants, Taber 23 missing ... Charcoal 02 just off the target, Charcoal 01 missing ... heavy SAM and AAA activity all quadrants, Taber 67 damaged, Taber 48 missing"

By the end of the first day, enemy air defenses had launched over 200 SAMs, claiming three B-52s and significantly damaging another two.

Post-mission debriefs revealed that while some aircrews had reluctantly accepted losses as inevitable, few had given little thought nor expected the "friction of war" awaiting them. Problems with not knowing the location of other B-52s and escort aircraft, broken equipment, similar sounding call signs, and radio saturation of SAM, MiG, and AAA reports plagued and confused the crews throughout the target area." Reports of aircraft losses were especially demoralizing. One crew member recalls:

I didn't think we were going to lose any airplanes, really. My first surprise was when they started calling for Charcoal 01 and couldn't raise him. We found out later that he'd been shot down -- We weren't so ready to go back the second night."

For days two and three, B-52 tactics and flight routing virtually mirrored those of day one. In contrast to day one, day two's B-52 losses were negligible - only two aircraft damaged. However, day three losses spelled a near disaster. Slightly over ten percent of the Guam's B-52G fleet failed to return and another six were recalled in fear they too would become casualties.¹⁰ Total bomber losses for day three: six destroyed; two damaged.

During day three pre-mission briefings, tempers flared as crews

angrily questioned and criticized the wisdom of their superiors for pursuing the stereotyped attack profiles. Major Charles Archie and others emphatically argued the unimaginative "assembly line" approach into Hanoi, coupled with the 90-to-180 degree Post Target Turn (PTT) increased bomber vulnerability to enemy defenses.¹¹ Defending their plan, wing staff officers pointed out that the routes avoided known SAM sites; the same routes and tactics used the previous day were successful (i.e., no aircraft losses); and an inflexible, 42 hour planning cycle (staff planners at Headquarters SAC selected targets and bomb run axis) precluded changes.¹²

Although unhappy with their answers, the crews pressed on. Nonetheless, the grim results of day three's activities and orders for continued attacks against Hanoi furthered crew frustrations and discontent and inflamed morale and motivation problems. These conditions continued to find fertile ground well into Phase II.

Phase II

Phase II brought several changes in B-52 tactics. The massive three wave assaults of earlier days were abandoned for smaller, single wave attacks. Aircraft intervals were also reduced, decreasing the enemy's engagement time by almost 50%.¹³ On day six, feints aimed at confusing enemy air defense sites were incorporated.

However, Phase II also saw the combined effects of fear, anxiety, and fatigue become more pronounced. For Guam's aircrews, missions were seldom less than 14 hours. Such profiles not only physically exhausted the aircrew, but provided plenty of time to both agonize over what lay ahead and question one's willingness for a repeat performance.¹⁴ While Utapao's missions were shorter

(approximately 3 1/2 hours), there were also less crews at Utapao. This became a major concern, particularly during Phase II.

Day three's losses had identified a major ECM defect in Guam's B-52G model aircraft. Until a solution could be found, most of Guam's B-52s were reassigned against less defended targets south of the DMZ. Consequently, the burden of continuing Linebacker fell upon the Utapao crews, many of which had already flown every night and were nearing a state of physical and emotional collapse.¹⁵ Recalling his own situation, Utapao-based pilot LTC John Yuill states:

The first night, we flew in the second wave [and] I remember seeing the fellow returning from the first wave. I didn't have to say a word to them - just one look at them and I knew it was going to be a bad night. I remember sitting in the briefing, thinking what it must have been like during WWII...wonder[ing] how many of these guys sitting here won't come back ... maybe I will be one that won't. The target that night was Radio Hanoi and the SAMs came at us from everywhere. We made it back and had another sobering experience when we saw the schedule included us for the second night. The second night was more of the same and again we made it back.¹⁶

Yuill and crew did not fly the third night, but instead were a "standby crew", anticipating the last minute call that never came. Scheduled to fly day four, Yuill confronted the flight scheduler, claiming his crew was "uptight" and needed some rest. Although promised reprieve from a fifth night of flying, Yuill still spoke with the unit commander, once again claiming he didn't think "we could keep up the pace much longer."¹⁷ On 23 December, twenty-two aircrews from Guam arrived at Utapao to replace losses and to give the remaining crews a much needed rest.¹⁸ Unfortunately, Yuill's crew was one of those losses.

Phase II also witnessed a continual decline in crew morale, motivation, confidence in leadership, and by one account, approached the threshold of mutiny.⁹ As losses grew, so did rumors and media reports claiming even higher rates. Convinced that tactics were at fault and leaders unwilling to act, aircrew morale and motivation waned as frustrations peaked. Flight Surgeon ledgers at Guam show that during this period, both sick call rates and cases involving medical grounding of aviators nearly doubled in number.¹⁰ Colonel James McCarthy, commander of one of two B-52 Wings at Guam, recalls on at least two occasions, feeling required to provide "pep talks" to uplift aircrew morale.¹¹ Other sources accused aircrews of exaggerating aircraft maintenance problems or intentionally damaging their planes to preclude flying.¹²

Seeking outside intervention, several crew members wrote to congressmen and President Nixon, complaining of unnecessary losses due to incompetent planning. In one case, a B-52 navigator wrote his congressman, claiming that he would refuse to fly further missions unless changes were made.¹³ Phase III would see those changes.

Phase III

Phase III came quick on the heels of a thirty-six hour Christmas stand down. During this interim, HQ SAC had finally relinquished planning authority to Guam planners. Almost immediately, a new attack strategy was developed, integrating the tactical ideas the crews had long advocated.¹⁴

Mixed emotions once again surfaced as crews were told their target was Hanoi. Since day one, Utapao's crews had watched as enemy air defenses damaged or destroyed almost 20 percent of their

aircraft." Furthermore, not since the grim results of day three had Guam seen Hanoi as their target. Now on day nine, some asked how many more crews and aircraft would be lost, and when would this end?" For one Utapao pilot, those unanswered questions proved too costly as he announced his refusal to fly future B-52 missions." Eighth Air Force historical records and aircrew testimony confirm Guam too was having its share of crew members refusing to fly."

However, other flyers soon recognized the merits and, more importantly, the source of the changes and quickly adopted the new plan as "their plan" for finally defeating the enemy. One commander reported a near-instant upsurge of aircrew confidence, morale, and enthusiasm as the new course of action and tactics were briefed." Later that evening, 116 B-52s converged upon their Hanoi targets from seven different directions, delivering a decisive psychological blow from which the enemy would be unable to recover. (Refer to Figure A-1 for a comparison of Phase I and III profiles.) Despite this success, one B-52 failed to return home, another crashed on landing at Utapao, killing all but two crew members, and a third sustained significant damage."

In the days that followed, crew motivation and morale received another boost. For the first time since the beginning of the raids, damage assessment photos were made available. These provided the aviators critical feedback on the success of their efforts.

On December 29, 1972, Linebacker II concluded operations after having successfully achieved its political and military goals. All total, 729 bombers missions were flown in this eleven day campaign. If we look to Linebacker in terms of numbers, we find an impressive

list of statistical data ranging from number of bombs dropped, enemy missiles launched, logistical, transportation, and communications facilities destroyed, and even civilian casualties."¹ Underscoring both the military and political success of Linebacker II, Senator Barry Goldwater willed, "Let us hope that the strategic bombing lessons of the 12 days in December does not escape us as we plan for the future."² However, if we instead view this campaign as a tool to enhance our understanding of those factors that influence an aviator's will to fight, we find some equally important lessons.

Section Four

Analyzing Linebacker II

The practical value of history is to throw the film of the past through the material projector of the present onto the screen of the future.

Liddell Hart, 1944³

In his analysis of WWI aviators, Lord Moran equates a flyer's courage or will to fight to that of money deposited in a bank account. On each and every mission the aviator flies, the combined effects of fear, anxiety, and fatigue bids the withdrawal and expenditure of a portion of this account. "The call on the bank might only be the daily drain ..., or it might be a sudden draft which threatened to close the account."⁴ A depleted account, according to Moran, renders a warrior unable or unwilling to face the stress of combat, providing fertile ground for unit disintegration.

Cohesion, training, morale, and a flyer's trust in leadership are the principle agents that regulate the rate of these "calls" or withdrawals, and holds the aviator's account in balance. During the Linebacker II campaign, the "calls" for courage and combat motivation

were plentiful and frequent, and for some, bankruptcy was the end result. This section seeks to analyze how well these four agents of combat motivation kept pace with the demands of the Linebacker raids. This process begins with a look at aircrew cohesion.

Throughout the Linebacker campaign, cohesion prevailed as a dominant and vital catalyst in sustaining the flyers' will to fly and fight. The idea of a closely integrated and highly cohesive team was nothing new to the B-52 crews. Their Emergency War Order (EWO) training alone had taught them well the necessity of cohesion if they wished to succeed and return from their nuclear strike mission.

B-52 crews inbound to both Utapao and Guam came as an integral, six-man combat team. Many of these crews had already been flying together as a unit for as much as six months; some up to a year."

Once in theater, several organizational and operational factors furthered the growth of cohesion among aircrews. Due to extremely limited housing, dining facilities, and local transportation, the aircrews literally ate, slept, worked, and spent their free time as a family of six." Their horizon of group cohesion was furthered as aircrews were formed into "cells", or groups of three aircrews. Cell tactics would prevail as the primary means of synchronizing B-52 firepower and mutual ECM protection throughout the Vietnam conflict. Henceforth, the crew's schedule revolved around the "cell" and every effort was made, within reason, to ensure cell integrity remained intact."

Like their WWII counterparts, cohesion generated a strong sense of loyalty and commitment among the Linebacker crews. An attitude of "not letting my buddies down" was not uncommon among the crews.

On a broad scale, many flyers perceived the POWs in Hanoi as members of their close-knit fraternity. From this came a willingness to brave and endure the physical and emotional demands of combat to secure their comrades' freedom."

Not letting one's comrades down was also a prevailing thought at the individual crew level. Even before the first Linebacker aircraft was airborne, several aviators who were previously restricted from flying for medical reasons experienced "miraculous recoveries" so they could fly with their crew."

Yet, by far, one of the most profound displays of cohesion sustaining an aviator's will to fight is found in day two's post flight debriefings. Almost thirty years earlier, S.L.A. Marshall had written:

I hold it to be one of the simplest truths of war that the thing which enables an infantry soldier to keep going with his weapon is the near presence ... of a comrade.¹⁰⁰

In a 1972 update of Marshall's claim, Colonel William Shackelford reports a similar event where a B-52 navigator professed:

I never realized that you could hear them [SAMs] explode like that. You could feel the concussion and hear it. And you get static on the hair on your arms. But you look around and [see] your feet were still there and the radar [bombardier] was still sitting next to you, so you knew you could press on.¹⁰¹

However, while cohesion certainly helped balance this aviator's "bank of courage", there is some room for doubt that his combat training met with equal success. Both Guam and Utapao had good local check-out programs to ensure all newly assigned aircrews were adequately trained for their mission. The first half of this program focused on the latest B-52 contingency bombing and cell formation

tactics, techniques, and procedures (TTP); escape and evasion issues; ECM tactics and equipment changes; and, other crew specific concerns.¹⁰²

The balance of formalized training consisted of three instructor supervised, "over-the-shoulder" flights, each emphasizing TTPs presented in the previous academics. Upon successful completion of the flights, the training was concluded, and the crew declared "combat ready." Although formalized training was complete at this point, the low threat Arc Light mission enabled aircrews to continue training and refine their combat skills, even if on an informal basis.¹⁰³ Yet in hindsight, training, formal or otherwise, appears to have short changed the B-52 crews in three areas.

As previously discussed, training fulfills several critical tasks. First, training helps to alleviate fear of combat by providing the flyer with a reasonably realistic or accurate picture of what to expect in battle. While in-theater combat training may have accurately portrayed and prepared crews for the Arc Light mission, it hardly prepared the crews for the threat-intensive Hanoi environment.

For instance, visual recognition of an approaching SAM was thought to be critical in determining the effectiveness of ECM jamming and aircraft maneuvers.¹⁰⁴ Yet, few B-52 flyers had ever seen a SAM, and even among those who had, the description varied.¹⁰⁵ To further illustrate this particular shortfall, one crew recalls repeatedly maneuvering on the bomb run, evading what the copilot described as a "SAM coming straight at them." After several turns, the crew realized that the "SAM" was not a missile after all, but a

star that had been there all along.¹⁰⁶

One Linebacker veteran suggests perhaps ignorance of the threat was "a blessing." "Unaware of how vulnerable they actually were probably enabled quite a few [crews] to go without any great cause of concern. However, on the second mission, the stress was much greater as they now knew what to expect."¹⁰⁷

In addition to portraying the battlefield, training also helps one to conquer their combat anxieties by increasing one's confidence in equipment, tactics, leadership, and fellow crew members. While training certainly strengthened crew confidence, discipline, and cohesion, a lack of realistic training tragically failed to highlight significant tactical and aircraft equipment deficiencies. Invalid tactics, specifically the high bank angle and rapid Post Target Turn (PTT), produced seven of the fifteen B-52 losses. Of the twenty-eight aircraft damaged or destroyed during the raids, at least nine were attributed to inadequate or broken ECM equipment.¹⁰⁸ By day three, aircrew confidence in both tactics and equipment were badly shaken and concerns over aircraft ECM continued to be a major source of aircrew anxiety and apprehension throughout the rest of the offensive.¹⁰⁹

Training also fell short in identifying significant problems with aircraft bomb release equipment. One wing commander concedes that more than once, B-52G aircrews were unable to release even a single bomb on their target due to equipment failure.¹¹⁰ It seems logical to assume if a crew had just flown over 3,000 miles, weaving through the better part of 200 SAM launchers, and finally arrived at the target only to be unable to release their weapons, that they

might be a bit reluctant to go back a second time.

Finally, training has a critical role in validating war planning concepts. In this role, a false assessment of aircrew and aircraft equipment capabilities misled HQ SAC planners and senior staff officers. Specifically, during Phase I planning, not only was the time required for the bombardier to properly identify his radar aimpoints grossly miscalculated, but the adverse effects of evasive action maneuvers upon aircraft bombing equipment were also over-exaggerated.¹¹¹

The combination of these mistakes and the desire to minimize collateral damage erred planners and leaders into unduly restricting aircrews from maneuvering against enemy threats during the bomb run -- the most lethal and threat intensive portion of their mission. After learning that several of the first day's crews had ignored this restriction, one wing commander threatened to court martial any crew that failed to comply. Fortunately, an analysis of day two activities refuted the staff planning assumptions, and both the maneuver restriction and promise of court martial were soon rescinded.

Nonetheless, by the end of day two, and certainly by the close of day three, aircrew apprehension began to increase as the effectiveness of their training, equipment, and even the tactical judgement of their leaders became suspect.¹¹² Further analysis of Linebacker II suggests that an absence of visible and consistent leadership also added to aircrew anxieties and apprehensiveness.

Earlier discussions contend that if a leader is to be effective at motivating his men, he must first gain their respect, confidence,

and trust. Similar to building a highly cohesive combat team, earning one's respect, trust, and confidence also requires considerable time. Yet, an audit of bombing leadership among the four B-52 Linebacker II units reveals that the time essential to conceiving such rapport was routinely denied.

For example, Carl Berger's The USAF in Southeast Asia reports that between February 1966 and July 1970, the average tour length for a 4133 Bomb Wing (BW) Commander was almost four months (refer to Figures A-2 thru A-3).¹¹³ When the 43rd Strategic Wing (SW) assumed the mission of the 4133rd on 1 April 1970, it also inherited the 4133rd's commander's short-tour legacy. Over the next forty-three months, seven colonels reigned as commander of the 43rd. Discounting one commander's tour of twenty-one months, the mean time of 43rd SW wing leadership held true to its four month tradition.¹¹⁴

A comparison of the other B-52 wings also reflects similar command lengths (refer to Figures A-4 thru A-6). Of the four B-52 units, only the 307th SW offered any significant degree of leadership stability. For instance, one 307th wing commander served almost an entire year in office before moving on and three of the first five 307th commanders exceeded six or more months in position.¹¹⁵ In contrast to the 307th, the 72nd SW (Provisional) averaged just over four months per commander, with one commander at the helm for a record six months.¹¹⁶ Likewise, the 310th SW (Provisional), junior of the two wings at Utapao, exchanged commanders almost once every three months.

Furthermore, command longevity at the onset of Linebacker II eluded all but one B-52 unit - the 307th SW (refer to Figure A-7).

Both the 43rd and 310th aircrews had fallen prey to a change of command within eighteen days of the start of Linebacker II. The 72th commander, on the other hand, was a bit more fortunate with just over two months in position before the beginning of the raids.

Whatever the motive of this revolving door concept of command, the end result effectively neutralized wing leadership as a potential source of combat motivation. With the extremely short rotation came an attitude among aircrews that the wing commander's role was simply one of an administrator or staff officer presiding over the aircrews as opposed to combat leader leading them. Furthermore, recurring changes in leadership not only left many aircrews uncertain of their new wing commander's tactical competence and technical expertise, but frequently left aircrews unsure of who was in command. One veteran of four B-52 Southeast Asia tours underscores this uncertainty, claiming: "You never really knew who was running the show from one day to the next."¹¹ For this and other B-52 flyers, the commanders' short-term rotation cycle significantly reduced leadership ability to influence and sustain their will to fight. Individual and crew morale, on the other hand, helped overcome this deficit.

In Lord Moran's jargon of capital, bank accounts, and combat motivation, the value of morale among the Linebacker aircrews can be best described as that of gold on the open market. While morale remained a constant source of strength among the aircrews, its value or "buying power" fluctuated based upon a wide variety of factors. Well defined goals and objectives, aircraft losses,

and success in combat were among the most influential factors.

Clear-cut mission goals and objectives proved especially important in cultivating aircrew morale and motivation during the threat-intensive Hanoi raids. In the years preceding Linebacker, the inconclusiveness of Arc Light had taken its toll upon aircrew morale. Instead of firm goals and objectives linking B-52 operations with an end to the Vietnam war, Arc Light offered the aircrews an infinite flow of indecisive and unchallenging missions, coupled with an endless cycle of aircrew temporary duty (TDY) rotations supporting these missions. With each TDY tour came a lessening of aircrew morale as mission results failed to provide any measurable level of success and anxieties over repeated family separations increased.¹¹⁸

Linebacker II, on the other hand, laid out a set of clearly defined objectives and goals. Furthermore, these were goals and objectives the aircrews could identify with. From a political perspective, convincing the North Vietnamese to return to the peace talks was the primary objective of Linebacker II. Yet, the B-52 aircrews saw this as a chance to destroy the enemy's ability to wage war, get the POWs home, and end the war once and for all.¹¹⁹ More importantly, the raids presented the crews an opportunity to finally overcome seven years of Arc Light frustrations and directly contribute to bringing the war to a conclusion favorable to U.S. interests. This too elevated morale and motivation among the flyers.

Analysis also reveals how the absence of an accurate flow of information among the aviators adversely influenced morale and

increased apprehension. In particular, aircrew morale proved especially vulnerable to rumors about aircraft losses. Without a formal means of keeping aircrews informed, misinformation via the rumor mill and media soon projected loss rates as high as two and three times the actual amount.¹¹⁰ Thus, many of the aircrew's fears and anxieties over combat losses were somewhat unjustified and could have been easily remedied had crews been adequately informed.

Furthermore, Linebacker II graphically illustrates how combat losses and unnecessary risk can undermine both morale and combat motivation. While Section Three has thoroughly outlined the impact of B-52 losses upon aircrew morale and motivation, it is important here to note the difference between unnecessary risks and those essential to mission accomplishment. Many crews felt that Phases I and II losses were unnecessary and could have been avoided if not for the repetitive and unimaginative tactics.¹¹¹ With some degree of certainty, a decrease in aircrew morale and willingness to fight as evidenced by even but a few combat refusals, increased sick call rates, and rumors of other forms of aircrew rebellion can be attributed to these losses.

Conversely, Phase III also suffered B-52 losses, yet the effect upon aircrew morale was not the same as during Phases I and II. As already described, Phase III tactics varied significantly from those employed during earlier missions. (See Figure A-1 for a comparison of Phase I and III profiles.) To the aircrews, these changes spelled success and the results of the day eight's mission activity confirmed their assessment. With the new tactics, B-52

losses were sharply reduced and those that did occur were now viewed as unfortunate, but necessary to achieve the political, military, and even personal goals of the Linebacker campaign.

Likewise, once it became readily apparent Linebacker II was indeed achieving its desired goals and objectives, morale and aircrew motivation grew by leaps and bounds. While witnessing both the final Linebacker II mission brief and his twenty-ninth day in command of the 43rd Strategic Wing, Colonel McCarthy makes a note of the "tonic of victory" and its impact upon aircrew morale and combat motivation:

As the crews filed into the briefing room, I could sense their rising level of confidence.... The rumor had started floating around that this might be the last day of the big raids and they wanted to be a part of it. I had crews who had just landed hours earlier from the previous night's mission ask[ing] to be put in the lineup. Crews who had been designated as spares argued emphatically as to why they should be designated as primary crews, rather than spare.... One crew even went so far as to file an Inspector General complaint.... With morale like that, I knew I had the best outfit in the United States Air Force.¹¹¹

In essence, Linebacker II highlights how the presence or absence of realistic training, effective leadership, aircrew morale, and cohesion can influence an aviator's will to fight. While the particular lessons of these four tenants are significant, even more important is how we can apply this newfound knowledge both now and in the future.

Section Five

Conclusions and Implications

*The Air Force wants no officers who are unafraid....
The Air Force does want officers who can conquer their
fears, suppress them in the interests of the nation,
and courageously carry on despite fear.*

The Air Force Officer's Guide¹³

Both theoretically and historically, morale, cohesion, training, and effective leadership have been the pillars to overcoming a warrior's fear of combat, sustaining his will to fight, reducing combat stress, and averting the potential of unit disintegration. Using the 1972 Linebacker II campaign, this monograph has brought into focus the trials and tribulations of aerial combat and the tremendous influence these four tenants can project even on today's battlefield. From our examination and subsequent analysis of this short, but intensive segment of aerial warfare, a number of conclusions and implications evolve.

From both an aircrew and commander's perspective, realistic training is an absolute in adequately preparing an aviator for the physical and emotional strains of combat. This preparation first begins with identifying the mission, tasks, and conditions under which the aircrew will be expected to operate and then developing training goals and objectives to meet this criteria. Periodically, these goals, objectives, and training criteria must be re-evaluated to ensure they reflect the reality of today's battlefield. Once established and validated, primary training emphasis should be directed at increasing the flyer's confidence and proficiency in meeting these goals and objectives. Only when training mirrors the battlefield will such genuine confidence and

proficiency be achieved. Anything less affords room for doubt -- doubt which will grow under the strain of combat and eventually undermine one's willingness to fly and fight.

Closely tied to building an airman's confidence is the need for accurate information and open communications. Accurate information reduces uncertainty which in turn reduces an airman's fear of combat. An aviator well versed in his enemy's weapons and capabilities and those of his own tends to be more confident simply by knowing how to maximize his strengths and exploit his enemy's weakness. Rumor and misinformation, on the other hand, tends to increase aircrew anxieties and fears which reduces one's combat motivation. During Linebacker II, rumors exaggerating B-52 losses and enemy air defense effectiveness needlessly subverted aircrew morale and combat motivation. Open communications within the unit can prevent such problems. In short, ignorance is not a "blessing," but instead a liability. For as an aviator's ignorance is overcome by the reality of combat, so is his confidence in training and leadership.

Confidence in one's leadership is another equally important element in motivating aviators in combat. Yet, the lesson here is that the only way a commander can establish his tactical and technical expertise and command the confidence, respect, and trust of his subordinates is to lead by example. Leaders who command from behind a desk, or those unfortunate victims of an untenable rotation cycle such as the one prevailing during Linebacker, will never gain the wide-spread confidence, respect, or trust of their subordinates. Moreover, in such cases it is truly the subordinate

who suffers, as he is not only denied an essential source of inspiration and moral courage, but a barrier of protection against the adversity of combat stress as well.

Furthermore, it is readily apparent that neither aircrew nor commander can afford to prepare for battle without the advantages of unit cohesion and morale. In his treatise Fighting Spirit, F.M. Richardson quotes Field Marshall Montgomery as claiming morale as the single greatest factor in war.¹²⁴ Cohesion, as AFM 1-1 clearly implies, is no less important.¹²⁵ Yet, neither high morale nor unit cohesion are the product of chance or accident. In truth, such attributes today are the result of hard work, a training environment emphasizing teamwork, unit stability, and sound leadership that clearly recognizes the importance of unit morale and cohesion. As the lethality and complexity of today's battlefield continues to escalate, the demand for cohesion and morale, if anything, becomes even more critical.

Finally, the most important implication lies in the relationship between the aviator and his aircraft. Air Force basic doctrine states that fundamental to an understanding of the guiding principles of war is the recognition of the three essential factors of warfare: man, machine, and the environment. Without question, today's Air Force has placed great emphasis upon the "machine" as our inventory of technologically superior aircraft clearly attest. Perhaps now, the time is ripe to turn our attention to the moral domain of battle and focus our efforts on understanding what best motivates our aviators to fight and prevail in combat.

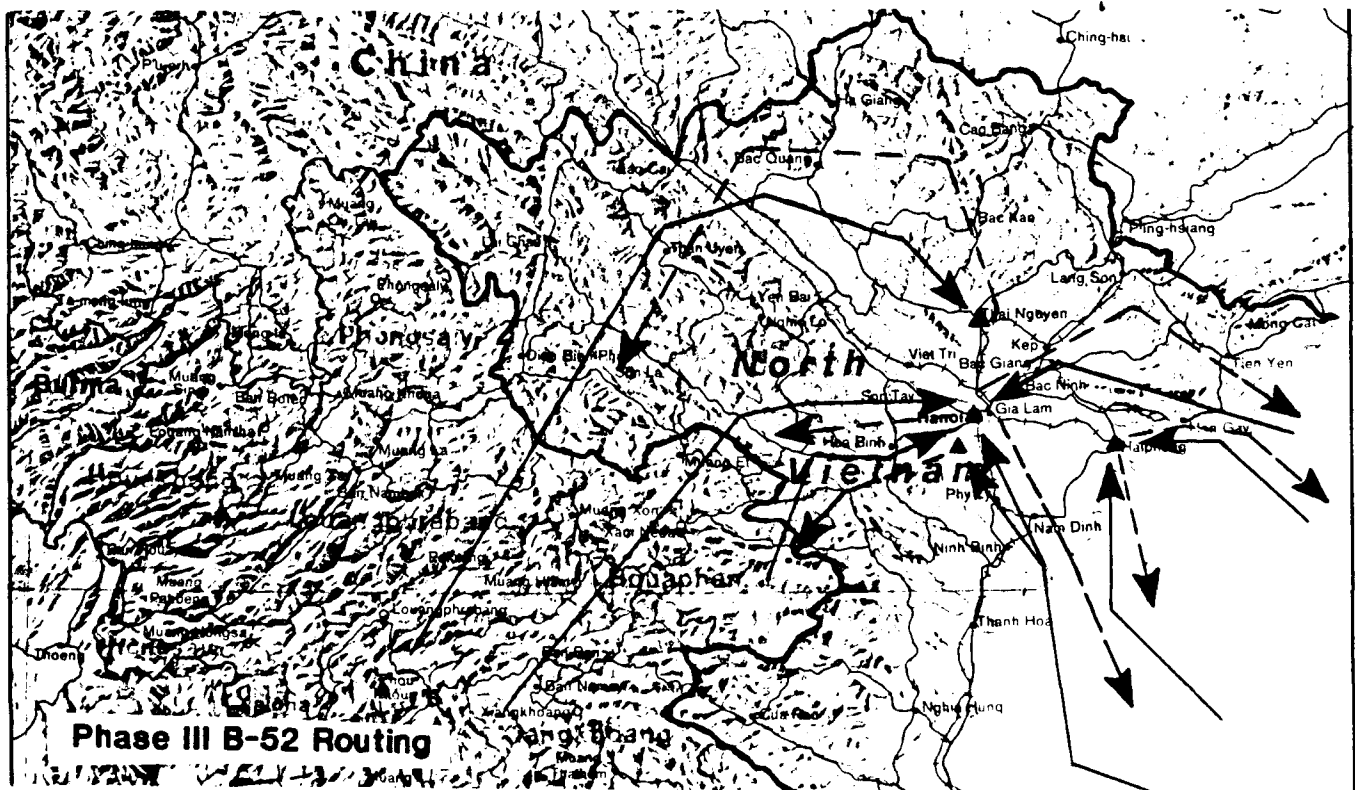
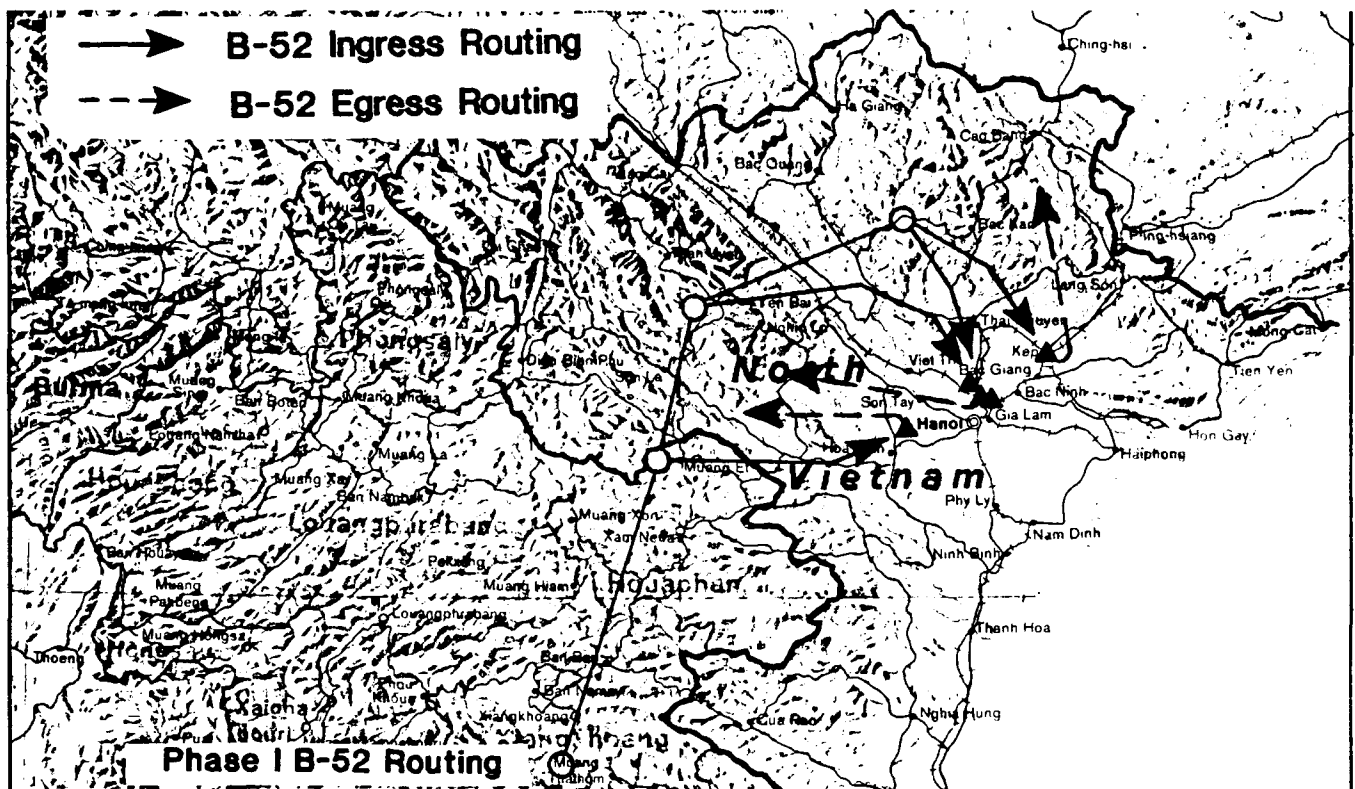


Figure A-1
Comparison of Typical Phase I & Phase III B-52 Routes

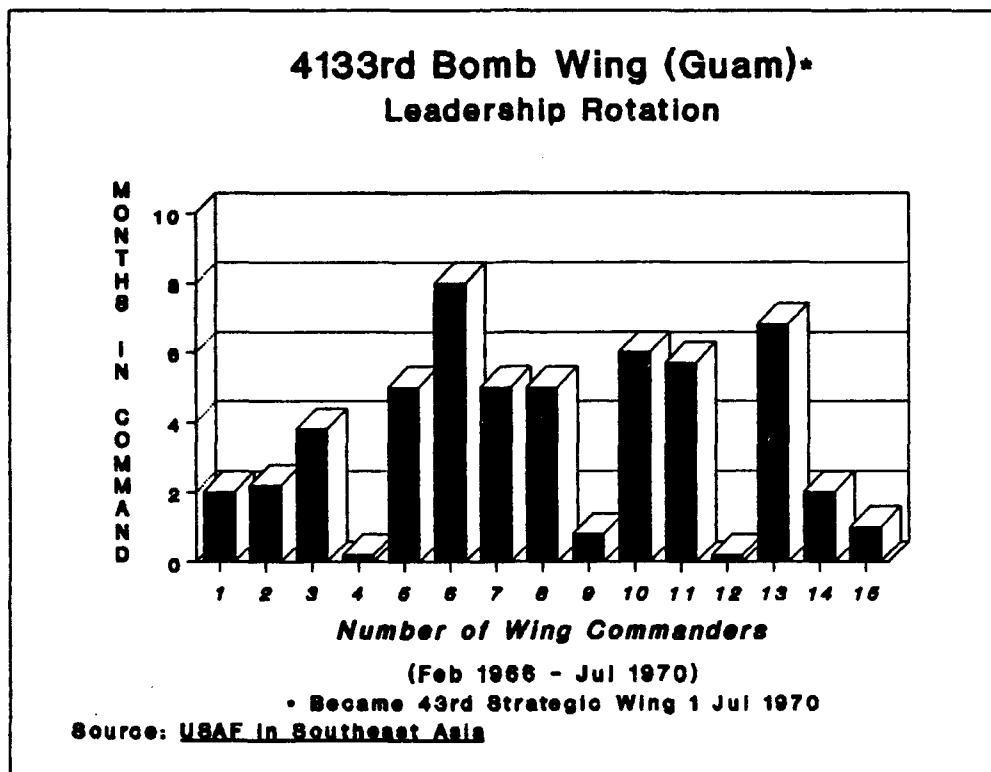


Figure A-2

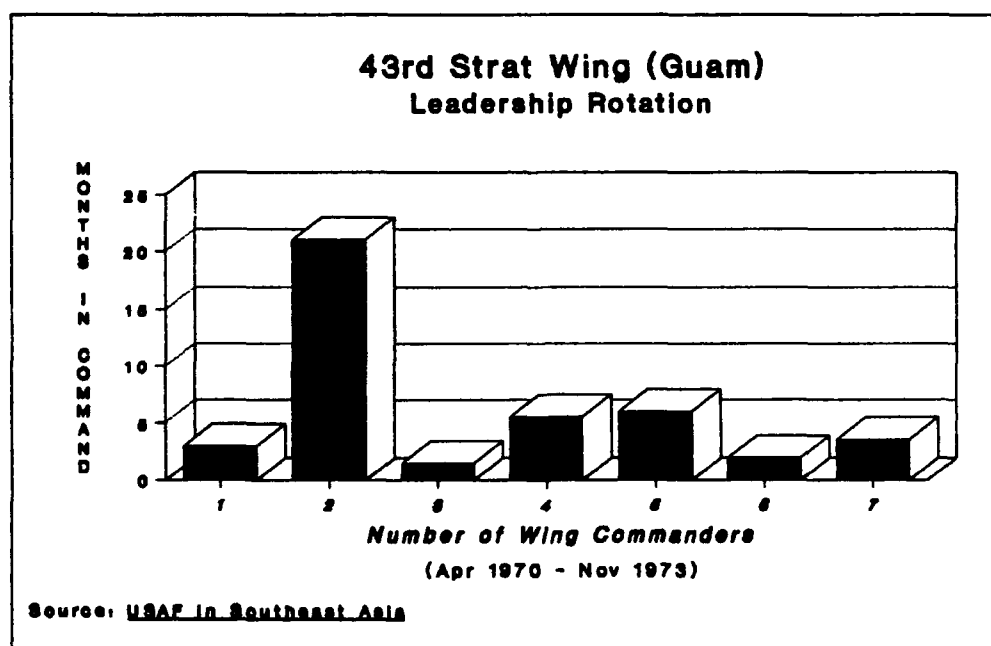


Figure A-3

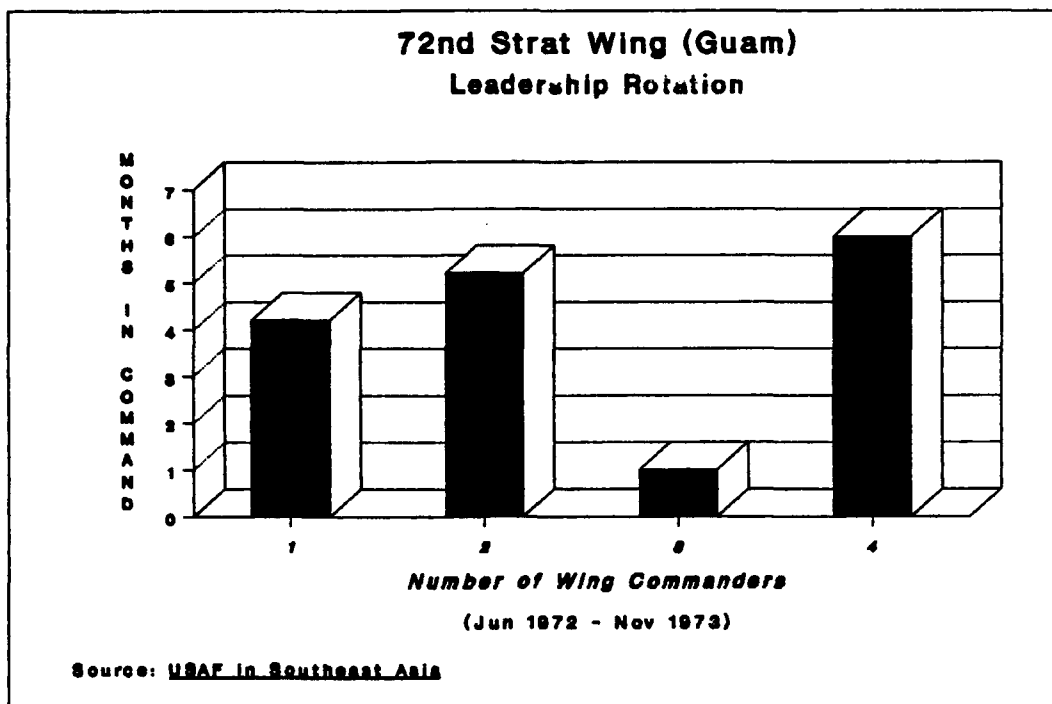


Figure A-4

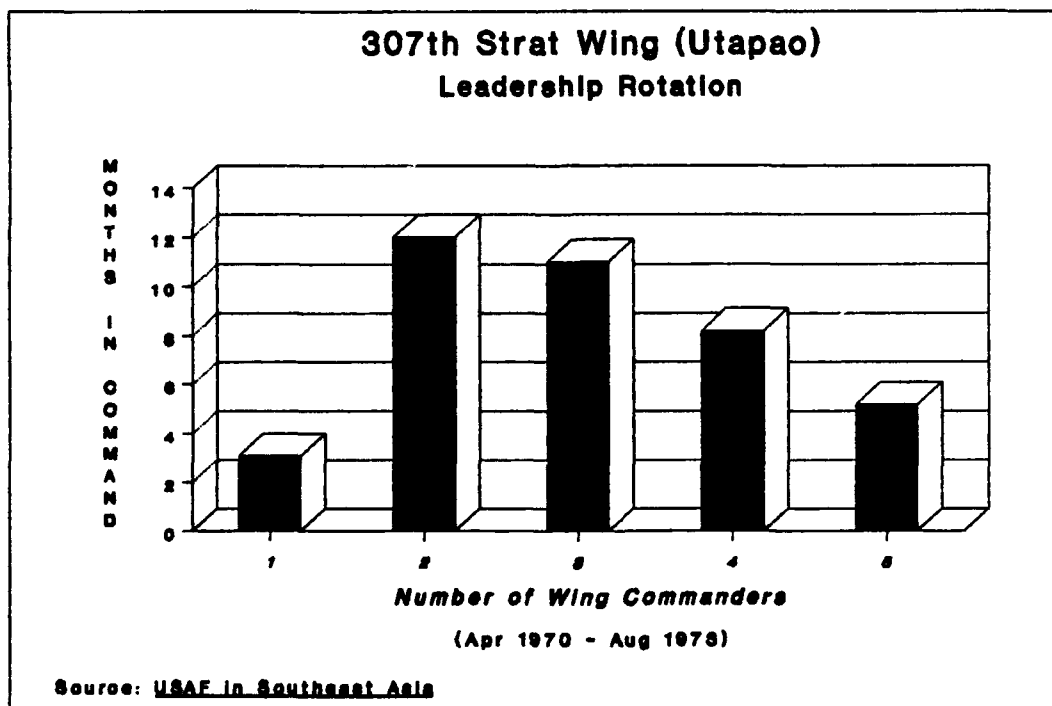


Figure A-5

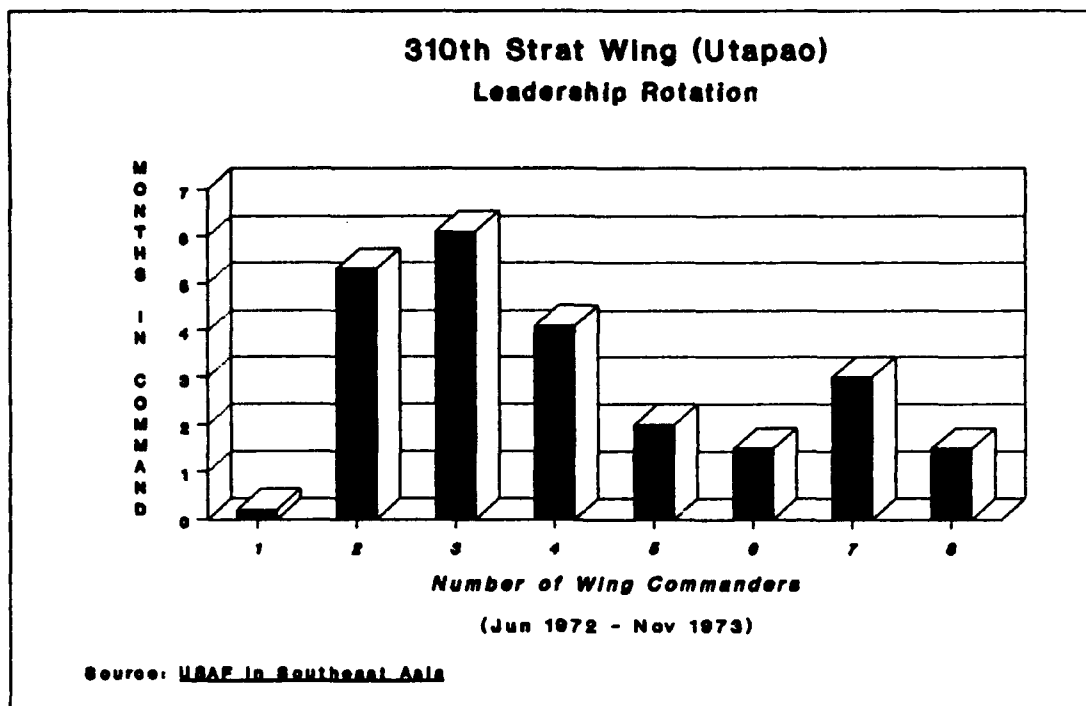


Figure A-6

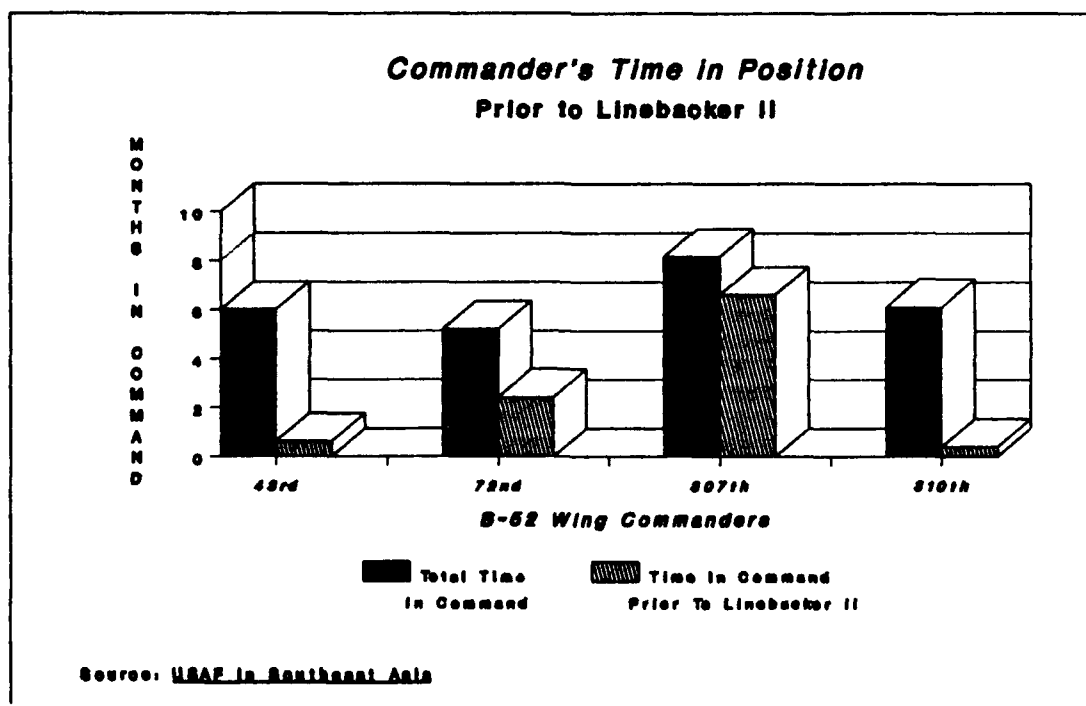
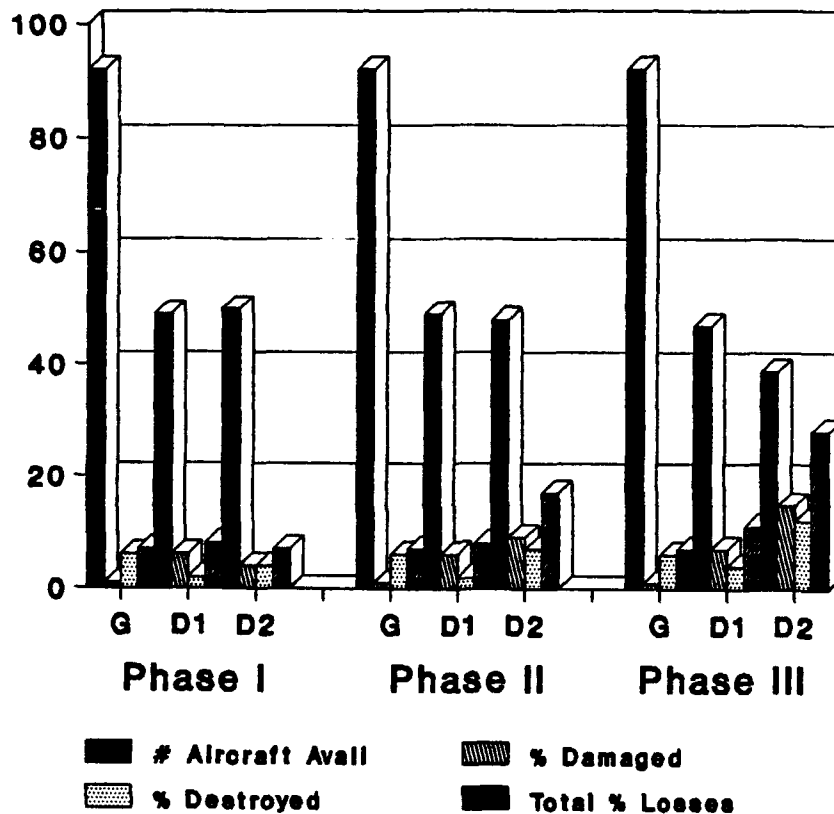


Figure A-7

Linebacker II B-52 Losses (Culminative By Phase)



"G" = Guam B-52G
 "D1" = Guam B-52D "D2" = Utapao B-52D
 Source: Linebacker II: The Untold Story

Figure A-8

ENDNOTES

1. Lieutenant Colonel John F. Guilmartin, Jr., "Military experience, The Military Historian, and The Reality of Battle", (Address at the Shelby C. Davis Center for Historical Studies, Princeton University, 8 October, 1982), p. 4.
2. Roy R. Grinker and John P. Spiegel, Men Under Stress, (Philadelphia, 1945), p. 418; Also see Psychological Disorders in Flying Personnel of The Royal Air Force, (London, 1947), p. 178.
3. Grinker and Spiegel, pp. 37-38.
4. Samuel B. Griffith, Sun Tzu: The Art of War, (New York, 1971), p. 64.
5. Colonel Ardant du Picq, Battle Studies, Ancient and Modern Battle, (Harrisburg, 1958), p. 96.
6. Lord Charles M.W. Moran, The Anatomy of Courage, (Boston, 1967), p. 102.
7. E.J. Dearnaley and P.B. Warr, Aircrew Stress in Wartime Operations, (London, 1947), p. 30.
8. William Morris, Ed., The American Heritage Dictionary, (Boston, 1976), p. 59.
9. Soraya S. Nelson, "Psychological Risks for Gulf Troops Outlined", Air Force Times, (November 26, 1990), p. 16.
10. Lieutenant Colonel Herman A. Laubrich, USAF. "The Control of Operational Fatigue", (Unpublished Air Command and Staff College Research Study, Air University, Maxwell AFB, AL., 1948), p. 8.
11. Grinker and Spiegel, p. 30.
12. Interesting enough, while S.L.A. Marshall documents that only 15 to 25% of ground soldiers actually fired their weapon in combat (Men Against Fire, 1978, p. 56), Air Force historian Michael S. Sherry (The Rise of American Air Power, 1987. p. 213) claims that "Combat airmen sometimes peeled off from engaging the enemy, dumped their bomb loads far from the target, or in other ways aborted their mission."
13. Anthony Kellett, Combat Motivation: The Behavior of Soldiers in Battle, (Boston, 1982), p. 104. Kellett writes that whether from a patriotic or professional perspective, historians have expressed reluctance in discussing either disintegration or panic in military units. This, undoubtedly, has contributed to the ills of identifying disintegration before it has the opportunity to spread.

14. John Keegan, The Face of Battle, (New York, 1986), p. 276; Also see Stephen D. Wesbrook, "The Potential for Military Disintegration", Sam C. Sarkesian, Ed., Combat Effectiveness: Cohesion, Stress, and The Volunteer Military, (Beverly Hills, 1980), p. 244.
15. Geoffrey Jukes, Carpathian Disaster: Death of An Army, (New York, 1971), pp. 143-159.
16. Kellett, pp. 106-107; Also see Keegan, p. 277.
17. Paul L. Savage and Richard A. Gabriel. "Cohesion and Disintegration in the American Army: An Alternative Perspective", Armed Forces and Society, (May, 1976), p. 340.
18. James J. Schneider, "Theoretical Paper No. 3: The Theory of Operational Art", (Unpublished Research Project: U.S. Army School for Advanced Military Studies, Fort Leavenworth, Ks, 1988), p. 5.
19. Grinker and Spiegel, p. 57; Also see Thomas M. Coffey, Decision Over Schweinfurt, (New York, 1977), p. 229; Michael S. Sherry, The Rise of American Airpower, (New Haven, 1987), p. 213.
20. Department of the Army, Operations, FM 100-5, (May, 1986), p. 14.
21. Kellett, p. 326.
22. Grinker and Spiegel, p. 46.
23. Major Thomas L. Lentz, "Combat Leadership: 56th Fighter Group 1943-1944", (Unpublished Air Command and Staff Research Project: Maxwell AFB, Al., 1986), p. 37.
24. F.M. Richardson, The Fighting Spirit: A Study of Psychological Factors in War, (New York, 1978), p. 79.
25. Captain John A. Miller, "Combat Stress Reactions Occurring in the Israeli Defense Force During the Lebanon Conflict of 1982", (1982 AMEDD Psychological Symposium, 15-19 November, 1982), p. 482; Also see Robert L. Maginnis, "Battle Stress, Are We Prepared?", Armor Magazine, (November-December 1984), p. 38.
26. Department of the Air Force, Air Force Basic Doctrine, AFM 1-1, (June, 1984), p. 2-9.
27. Ben Shalit, The Psychology of Conflict and Combat, (New York, 1988), p. 78.
28. Grinker and Spiegel, p. 22; Also see J.K. Hemphill and L. Sechrest, "A Comparison of Three Criteria of Air Crew Effectiveness in Combat over Korea", Journal of Applied Psychology, (No. 36, 1952), pp. 323-327.
29. John Dollard, Fear In Battle, (Washington, DC, 1944), p. 46.

30. Shalit, pp. 11-12. A 1974 study of 537 IDF veterans rated letting comrades down as "The most frightening aspect of battle." A follow up study of Swedish UN forces in Lebanon revealed the identical concern as a top priority.
31. Grinker and Spiegel, pp. 45 and 113.
32. Shabtai Noy, "Combat Psychiatry: The American and Israeli Experience", Gregory Belenky, Ed., Contemporary Studies in Combat Psychiatry, (Westport, 1987), pp. 78-79.
33. R.M. Vangorder, "Qualitative Analysis of Combat Stress", (Air Force Institute of Technology Research Project, Wright Patterson AFB, Oh., 1987), pp. 42-43.
34. Richard A. Gabriel and Paul L. Savage, Crisis in Command: Mismanagement in the Army, (New York, 1978), pp. 8-9.
35. Kellett, p. 43; Also see T.S. Hart, "Determination in Battle", Armor Magazine, (May-June, 1980), p. 34.
36. Westbrook, p. 268.
37. Shabtai Noy, "Combat Psychiatry: The Israeli Experience" (Paper presented at the AMEDD Division and Combat Psychiatry Short Course, Monterey, California, April-May, 1980), p. 13.
38. Jon A. Shaw, "Psychodynamic Consideration in the Adaption to Combat", Gregory Belenky, Ed., Contemporary Studies in Combat Psychiatry, (Westport, 1987), p. 120.
39. Department of the Army, Military Leadership, FM 22-100, (1983), p. 304.
40. Richardson, pp. 2-3.
41. Carl von Clausewitz, On War, Edited and Translated by Michael Howard and Peter Paret, (Princeton, 1984), p. 231.
42. Gregory Belenky, Shabtai Noy, and Zahava Solomon. "Battle Stress, Morale, Cohesion, Combat Effectiveness, Heroism, and Psychiatric Casualties: The Israeli Experience", Contemporary Studies in Combat Psychiatry, pp. 15-16.
43. Grinker and Spiegel, p. 37.
44. John Baynes, Morale: A Study of Men and Courage, (Garden City Park, 1988), p. 101.
45. Richardson, p. 171.
46. Belenky, Noy, and Solomon, p. 15.
47. Kellett, p. 258.

48. Baynes, p. 100.
49. Charles D. Marshaian. "A Study of Human Factors that Affect Combat Effectiveness on the Battlefield", (Unpublished Thesis. Monterey, California: U.S. Naval Postgraduate School, 1982), p. 28.
50. Vangorder, p. 37.
51. Lee Ewing, "Dueling with the Desert", Air Force Times, (December 10, 1990), p. 10.
52. Shaw, p. 120.
53. Anon editorial, "Moorer on Airpower", Aviation Week and Space Technology, (September 17, 1973), p. 7. Also see Alan L. Gropman "Lost Opportunities: The Air War in Vietnam", American War in Vietnam: Lessons, Legacies, and Implications For Future Conflicts, (Westport, 1987), p. 62.; U.S.G. Sharp, Strategy For Defeat: Vietnam in Retrospect, (San Rafael, 1978), p. 252.
54. For the purposes of this monograph, both the Arc Light and subsequent Bullet Shot B-52 deployments are combined under the single title of Arc Light.
55. Robert R. Kritt, "B-52 Arc Light Operations", Carl Berger, Ed. The United States Air Force in Southeast Asia: 1961-1973, (Washington, DC, 1984), p. 167.
56. Robert R. Kritt, p. 157. Also see Bernard C. Nalty, Air Power and The Fight for Khe Sanh, (Washington DC, 1973), p 88. Of note, General Westmoreland assigned the B-52 bombings at Khe Sanh the title of Operation Niagara "Because I visualized your bombs falling like water over the famous falls . . . and that's exactly what happened."
57. William W. Momyer, Air Power in Three Wars, (Washington DC, 1978), pp. 182 and 284. General Momyer offers two reasons why B-52s were not employed north of DMZ until April 1972. First, President Johnson feared use of B-52s against targets in North Vietnam would be viewed as an escalation of the conflict and might result in direct Soviet or Chinese intervention. A second reason was a psychological concern that B-52 losses could have a negative impact on the credibility of U.S. strategic forces.
58. "P.O.W.s: Christmas in Hanoi", Time Magazine, (1 January, 1973), p. 12.
59. Momyer, pp. 282-3.
60. Schligh, pp. 136 and 274.
61. Ray L. Bowers, "Air Power in Southeast Asia: A Tentative Appraisal", A.F. Hurley and R.C. Erhart editors Air Power and Warfare (Washington, DC, 1978), p. 316. Also, Col. John C. Dalton (USAF Retired) recalls one mission in which their target was listed as a "suspected reinforced enemy command bunker." Post mission

intelligence revealed the target was actually a foxhole with a tin roof. LTC Robert Moulds (USAF Retired) remembers a similar situation, where after four consecutive days of bombing the same target area, he became convinced that he was doing nothing more than simply "moving dirt from one crater to another."

62. Robert A. Clement, "A Fourth of July in December: A B-52 Navigator's Perspective of Linebacker II", (Unpublished Air Command and Staff Research Project: Maxwell AFB, Al., 1984), p. 27.

63. Col. Larry Odom (Telephone interview on 19 Sep 90); Col. John Dalton (Telephone interview on 23 Sep 90); Maj. Sherman West (Telephone interview on 12 Sep 90).

64. Terry Gelonick, "At The Hands of The Enemy: A Bomber Pilot's View", (Unpublished Air Command and Staff Research Project: Maxwell AFB, Al., 1981), p. 3.

65. Mark Clodfelter, The Limits of Air Power: The American Bombing of North Vietnam, (New York, 1989), p. 186.

66. Robert E. Wolff, p. 89.

67. Billy F. Shackelford, Charles G. Luse, and Ray E. Stratton. "Eleven Days in December: Linebacker II", (Unpublished Air War College Research Project: Maxwell AFB, Al., 1977), p. 45.

68. James R. McCarthy and George B. Allison, Linebacker II: A View From the Rock, (Maxwell AFB, Al, 1979), p. 64.

69. Eschmann, pp. 109-110.

70. Ibid., p. 145.

71. Clement, pp. 34 and 42.

72. Ibid., pp. 48-49.

73. Ibid., p. 141.

74. History of 307th Strategic Wing October-December, 1972, Volume I, (12 July, 1973), p. 52. Captain D.J. Ranalli, a B-52 navigator, also claims, "I think if we'd have had to fly out of Guam with that six-hour flight over the water, you'd have had nothing to do but sit there and think about where you were going. Here at Utapao, from the minute we took off, until we hit the target and got back, we were busy constantly running checklist and everything. Everything came so fast. We were in there and it was really over with before we even knew it."

75. McCarthy, pp. 110-111.

76. Eschmann, p. 146.

77. Ibid., p. 146.

78. Ibid., p. 146. Just seconds short of the target, Yuill and the other two aircraft in his cell were engaged by up to ten SAMs. As his bombs began separating from his aircraft, two SAMs impacted Yuill's aircraft, sending it out of control. The entire crew successfully ejected from their disabled aircraft, but unfortunately, were soon captured. Post mission analysis attributed the damage to Bach Mai Hospital and surrounding residential areas to Yuill's aircraft.

79. Dana A. Drenkowski, "The Tragedy of Linebacker II", Armed Forces Journal, (July, 1977), p. 26.

80. Headquarters 8th Air Force, History of Eighth Air Force, 1 July 1972-30 June 1973, Vol. II, Narrative-Part II, (23 August, 1974), p. 434.

81. Ibid., p. 434.

82. John Morrocco, Rain of Fire: Air War, 1969-1973, (Boston, 1985), p. 153; Also see Dana Drenkowski, "Operational Linebacker II", Soldier of Fortune, (October, 1977), pp. 26-27; Richard Halloran, "The War is Suddenly Grim for the B-52 Fliers on Guam", New York Times, (30 December, 1972), p. 1.

83. "Sheer Stupidity Charged", New York Times, (11 January, 1973), p. 11. Also See Jack Anderson, "B-52 Pilots Assail Viet Flight Tactics", The Washington Post, (25 January, 1973), p. H-7.

84. Eschmann, p. 162.

85. Ibid., p. 77. Utaoia began Linebacker with 54 (assuming 100% operational) aircraft. At the end of Phase II, four had been shot down and another five seriously damaged, equating to 16.66%.

86. McCarthy, p. 127.

87. "B-52 Pilot Who Refused Mission Calls War Not Worth the Killing", New York Times, (12 January, 1973), p. 1.

88. History of Eighth Air Force, 1 July 1972-30 June 1973, p. 434. Also Maj Jim Sims remembers flying as a substitute pilot on 28 December (Day 10), replacing another pilot who refused to fly further Linebacker II missions. Sims also recalls as many as six other crew members also refused any more flights during this period.

89. McCarthy, p. 128.

90. Eschmann, p. 174. The crash landing of Ash 01 at Utaoia in itself is an interesting case of courage and motivation. As it turns out, the co-pilot was hesitant of flying the mission to begin with, and had considered "calling in sick" to preclude going. Furthermore, the B-52 crew member who pulled the injured co-pilot from the wreckage moments before it exploded, was shortly threatened with a court-martial for having left the base without permission (aircraft's

final resting place was outside the base perimeter). A near crew revolt soon changed the court-martial threat into an Airman's Medal for heroism.

91. Clodfelter, p. 194.

92. Ibid., p. 201.

93. Robert Debs Henl, Jr., p. 149.

94. Moran, p. 61.

95. Maj. Jim Sims (Telephone interview on 23 September, 1990), Also Col. J. Dalton (23 September, 1990), LTC R. Moulds (12 September, 1990), and Maj. S. West (12 September, 1990).

96. McCarthy, pp. 15-16 and 150. A B-52 crew of six were housed in a room originally designed for two. At both bases, the Officer's Club was the primary messing facilities, and bus was the basic means of transportation.

97. Ibid., pp. 17 and 44. Col. McCarthy recalls a significant obstacle to cell continuity issue was the 179 day aircrew temporary duty (TDY) rotation cycle. He briefly describes this issue in relation to the start-up of Linebacker II.

98. Maj. L. Becker, (Telephone interview, 16 September, 1990); Also Dalton, Odom, Moulds, Sims, and West.

99. McCarthy, p. 45; Also Wolff. p. 91.

100. S.L.A. Marshall, Men Against Fire, (Gloucester, 1978), p. 42.

101. Shackelford, p. 56.

102. McCarthy, p. 17.

103. Eschmann, p. 138. Clement (pp. 13-15.) also describes the use of the Arc Light mission as a means of refining and maintaining aircrew proficiency.

104. Ibid., pp. 117-118.

105. Clement, p. 34. Clement recalls where his copilot was concerned that he was the only pilot out of six in his cell that had seen a SAM. Descriptions varied between a "telephone pole" or "flashlight coming straight at you" to a "donut", with the "hole" being the actual missile and the plume forming the outer ring.

106. Eschmann, p. 110.

107. Col. L. Odom, Telephone interview, 19 September 1990.

108. Eschmann, pp. 91-175.

109. Clement, p. 33; Also see Gelonick, p. 21.

110. McCarthy, p. 70.

111. Ibid., p. 77.

112. Peter J. Giroux, "Fifty-Two Days in Hanoi: A B-52 Pilot's Perspective", (Maxwell AFB, Al., 1982), pp. 34-35. Also See Clement, pp. 33-34 and 42.; Clodfelter, pp. 192-193.; Drenkowski, pp. 26-27.; Wolff, p. 91.; LTC R. Moulds (12 September 1990); Maj. J. Sims (23 September 1990); and previously cited references in footnotes 80 and 81. Furthermore, HQ SAC's recall of the six B-52Gs as well as the loss five B-52Gs certainly had to send a strong signal concerning B-52G ECM effectiveness.

113. Carl Berger, ed., The United States Air Force in Southeast Asia, (Washington, DC, 1984), pp. 346-347 and 350. Also see McCarthy, pp. 177-180. Note: The four month command average time for the 4133rd Bomb Wing does not include three tours, each less than one month in length. If these commands were included, the tour average drops to 3.58 months.

114. Ibid., p. 346.

115. Ibid., p. 346-347. Also note, that in the interest of arriving at a comparable evaluation, only the first five 307th command tours were used in calculating mean times. If all seven were utilized, the mean time in command value would have increased to almost eight months and a rise in frequency of tours six months or longer from 60% to 71%.

116. Ibid., p. 346-347.

117. LTC Jerry Sherbert, (Telephone interview on 3 November 1990), Also interviews with Moulds, Odom, Sims, and West.

118. Gelonick, p. 3; Also LTC Moulds cites marital problems brought about by the recurring Arc Light tours as a significant source of aircrew anxiety and low morale. Within his bomb squadron alone, Moulds estimates a 30-35% divorce rate as a result of repeated Arc Light TDY tours. Of the nine B-52 crew members interviewed for this research project, almost 80% had three or more Southeast Asia tours, 38% five or more tours, and 38% suffered divorce as a consequence of their tours.

119. Gelonick, p. 3.

120. Richard Halloran, "Bombing Halt Brings Relief to B-52 Crews in Guam", The New York Times, (2 January, 1973), p. 3; Also Fox Butterfield, "All U.S. Bombing Believed Halted for the Holidays", The New York Times, (1 January, 1973), p. 1 and 3.

121. Warren L. Harris, "The Linebacker Campaigns: An Analysis", (Maxwell AFB, Al., 1987), p. 22. Also see Wolff, p. 91; Drenkowski, "The Tragedy of Operation Linebacker II", p. 26; and Clement, p. 47-

48.

122. McCarthy, p. 166.

123. John H. Napier III, The Air Force Officer's Guide (27th Edition), (Harrisburg, 1986), p. 258.

124. F.M. Richardson, p. 1.

125. Department of the Air Force, Air Force Basic Doctrine, AFM 1-1, (June, 1984), p. 2-9.

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